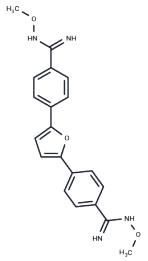
Data Sheet (Cat.No.T16428)

TargetMol

Pafuramidine

Chemical Properties



CAS No. : 186953-56-0

Formula: C20H20N4O3

Molecular Weight: 364.4

Storage: Store at low temperature,Store under nitrogen
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Pafuramidine (DB289) is an experimental prodrug of the orally active metabolite DB75, a potent antiparasitic compound with anti-malarial activity used in the study of parasitic infections and sleeping sickness.
Targets(IC50)	Antibiotic,Parasite
In vitro	The results of this investigation suggest that DB75 inhibits mitochondrial function. Yeast cells relying upon mitochondrial metabolism for energy production are especially sensitive to DB75 [1].
In vivo	In monkeys infected with Trypanosoma cruzi, treatment with oral Pafuramidine at doses of 1, 3 and 10 mg/kg for five consecutive days on the seventh day post-infection (p.i.) of early infection showed that Pafuramidine treatment benefited most of the monkeys, and at the end of the experiment all monkeys except group 1 had improved body weights and PCVs, and in some individuals parasitemia and cerebrospinal fluid parasitemia had cleared. [1]

Solubility Information

Solubility	DMSO: 33.33 mg/mL (91.47 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.49 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7442 mL	13.7212 mL	27.4424 mL
5 mM	0.5488 mL	2.7442 mL	5.4885 mL
10 mM	0.2744 mL	1.3721 mL	2.7442 mL
50 mM	0.0549 mL	0.2744 mL	0.5488 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mdachi RE, et al. Efficacy of the novel diamidine compound 2,5-Bis(4-amidinophenyl)- furan-bis-O-Methylamidoxime (Pafuramidine, DB289) against Trypanosoma brucei rhodesiense infection in vervet monkeys after oral administration. Antimicrob Agents Chemother. 2009 Mar;53(3):953-7.

Pohlig G, et al. Efficacy and Safety of Pafuramidine versus Pentamidine Maleate for Treatment of First Stage Sleeping Sickness in a Randomized, Comparator-Controlled, International Phase 3 Clinical Trial. PLoS Negl Trop Dis. 2016 Feb 16;10(2):e0004363.

Chen D, et al. Pafuramidine for Pneumocystis jiroveci pneumonia in HIV-infected individuals. Expert Rev Anti Infect Ther. 2007 Dec;5(6):921-8.

Purfield AE, et al. Interactions of DB75, a novel antimalarial agent, with other antimalarial drugs in vitro. Antimicrob Agents Chemother. 2008 Jun;52(6):2253-5.

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